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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,755	04/23/2001	Vasily A. Topolkaev	44040-254221	4991

7590 04/23/2004  
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EXAMINER

BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/840,755	<b>Applicant(s)</b> TOPOLKARAEV ET AL.	
	<b>Examiner</b> Jennifer A Boyd	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed January 16, 2004, have been entered and have been carefully considered. Claims 1 and 10 - 13 are amended, claims 19 - 20 are added and claims 1 - 20 are pending. In view of Applicant's amendments, the Examiner withdraws all rejections set forth in paragraph 3 of the previous Office Action dated August 12, 2003. However, after an updated search, the invention as currently claimed is found to be unpatentable for reasons herein below.

### ***Claim Objections***

2. Claims 14 and 15 are objected to because of the following informalities: claims 14 and 15 are duplicates; please cancel or amend one of the claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102/103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 - 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wu et al. (US 5,336,457).

Wu is directed to a method of making a compostable polymeric composite sheet (Title).

As to claim 1, Wu teaches a composite film comprising a top and bottom layer of a water

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insoluble thermoplastic film and a film of water soluble polymer therebetween and stretching the composite (Abstract). Wu teaches that the water insoluble thermoplastic films can comprise biodegradable polymers (column 2, lines 57 – 67). The Examiner equates the top or bottom layer of the water insoluble thermoplastic film to Applicant's "biodegradable polymer" and the water soluble polymer film to Applicant's "water soluble polymer". It should be noted that the Examiner equates the composite film of Wu to Applicant's "stretched precursor film".

As to claims 4 - 5, Wu teaches that the water insoluble thermoplastic film, or "biodegradable polymer", can comprise polycaprolactone (column 2, lines 65 – 68). It should be noted that the Applicant states on lines 1 – 5 on page 6 of the Specification that polycaprolactone is an aliphatic polyester.

As to claims 6 and 7, Wu teaches that the water soluble film, or "water soluble polymer", can comprise polyvinyl alcohol or polyethylene oxide (column 4, lines 1 – 20).

As to claims 14 – 15, Wu teaches that the composite film can have a thickness between 0.5 – 10 mils (column 6, lines 40 – 50).

As to claim 16, Wu teaches that the bottom layer may be combined with a porous web of nonwoven thermoplastic fibers (column 4, lines 65 – 69).

As to claim 17, Wu teaches that the composite film may be used for applications such as diapers, underpads, hygienic pads and the like (column 1, lines 30 – 40).

As to claim 18, Wu teaches that the composite film may be used for *disposable* diapers (column 1, lines 30 – 40).

As to claims 1 – 3 and 8 –9, although Wu does not explicitly teach the claimed water vapor transmission rate of greater than about 2500g/m<sup>2</sup>/24 hours as required by claim 1, water vapor transmission rate of greater than about 3000g/m<sup>2</sup>/24 hours as required by claim 2, water vapor transmission rate of greater than about 3500g/m<sup>2</sup>/24 hours as required by claim 3, elongation at break of greater than 100% as required by claim 8 and elongation at break of greater than 200% as required by claim 9, it is reasonable to presume that water vapor transmission rate of greater than about 2500g/m<sup>2</sup>/24 hours as required by claim 1, water vapor transmission rate of greater than about 3000g/m<sup>2</sup>/24 hours as required by claim 2, water vapor transmission rate of greater than about 3500g/m<sup>2</sup>/24 hours as required by claim 3, elongation at break of greater than 100% as required by claim 8 and elongation at break of greater than 200% as required by claim 9 is inherent to Wu. Support for said presumption is found in the use of like materials (i.e. a film comprising a biodegradable polymer and water soluble polymer with a thickness range of 0.01 to 5 mils) which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of water vapor transmission rate of greater than about 2500g/m<sup>2</sup>/24 hours as required by claim 1, water vapor transmission rate of greater than about 3000g/m<sup>2</sup>/24 hours as required by claim 2, water vapor transmission rate of greater than about 3500g/m<sup>2</sup>/24 hours as required by claim 3, elongation at break of greater than 100% as required by claim 8 and elongation at break of greater than 200% as required by claim 9 would obviously have been present once the Wu product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

As to claims 10 – 13, Wu discloses the claimed invention except for that the multilayer film includes about 1 – 50% of the water soluble polymer as required by claim 10, the multilayer film includes about 5 – 30% of the water soluble polymer as required by claim 11, the multilayer film includes about 50 – 99% of the biodegradable polymer as required by claim 12 and the multilayer film includes about 70 – 99% of the biodegradable polymer as required by claim 13. It should be noted that the amount of water soluble polymer and biodegradable polymer are a result effective variables. For example, as the amount of water soluble polymer increases, the film becomes more susceptible to water. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create the multilayer film includes about 1 – 50% of the water soluble polymer as required by claim 10, the multilayer film includes about 5 – 30% of the water soluble polymer as required by claim 11, the multilayer film includes about 50 – 99% of the biodegradable polymer as required by claim 12 and the multilayer film includes about 70 – 99% of the biodegradable polymer as required by claim 13 since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the amount of water soluble polymer and the biodegradable polymer in order to create an ideally balanced biodegradable/water soluble multilayer film.

5. Claims 1 – 20 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Topolkaraev et al. (US 6,586,354).

Topolkaraev is directed to a microlayer breathable hybrid film of degradable polymers

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and thermoplastic elastomers (Title).

As to claim 1, Topolkaraev teaches that the microlayer film comprises water degradable polymers and biologically degradable polymers (column 6, lines 40 – 50). Topolkaraev teaches that the microlayer film is subjected to stretching operations (column 11, lines 30 – 35).

As to claims 4 - 5, Topolkaraev teaches that the biologically degradable polymer can be polycaprolactone (column 6, lines 60 – 65). It should be noted that the Applicant states on lines 1 – 5 on page 6 of the Specification that polycaprolactone is an aliphatic polyester.

As to claims 6 and 7, Topalkaraev teaches that the water degradable polymer can be polyethylene oxide or polyvinyl alcohol (column 6, lines 40 – 50).

As to claims 14 and 15, Topalkaraev teaches that the microlayer breathable film has a thickness of less than about 10 mils (column 5, lines 30 – 35).

As to claim 16, Topalkaraev teaches that the microlayer film can be laminated to one or more nonwoven webs (column 12, lines 20 – 25).

As to claim 17, Topalkaraev teaches that the multilayer film can be used for diapers, feminine napkins, incontinence products and other applications (column 1, lines 15 – 30).

As to claim 18, Topalkaraev teaches that the multilayer film is disposable (column 3, lines 50 – 65).

As to claim 19, Topalkaraev teaches that the multilayer film is stretched from about 100 to 500 percent of its original length.

As to claims 1 – 3, 8 – 9 and 20, although Topolkaraev does not explicitly teach the claimed water vapor transmission rate of greater than about  $2500\text{g/m}^2/24$  hours as required by

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claim 1, water vapor transmission rate of greater than about 3000g/m<sup>2</sup>/24 hours as required by claim 2, water vapor transmission rate of greater than about 3500g/m<sup>2</sup>/24 hours as required by claim 3, elongation at break of greater than 100% as required by claim 8 and elongation at break of greater than 200% as required by claim 9, it is reasonable to presume that water vapor transmission rate of greater than about 2500g/m<sup>2</sup>/24 hours as required by claim 1, water vapor transmission rate of greater than about 3000g/m<sup>2</sup>/24 hours as required by claim 2, water vapor transmission rate of greater than about 3500g/m<sup>2</sup>/24 hours as required by claim 3, elongation at break of greater than 100% as required by claim 8, elongation at break of greater than 200% as required by claim 9 and elongation at break of greater than 350% as required by claim 20 is inherent to Topolkaraev. Support for said presumption is found in the use of like materials (i.e. a film comprising a biodegradable polymer and water soluble polymer with a thickness range of 0.01 to 5 mils) which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of water vapor transmission rate of greater than about 2500g/m<sup>2</sup>/24 hours as required by claim 1, water vapor transmission rate of greater than about 3000g/m<sup>2</sup>/24 hours as required by claim 2, water vapor transmission rate of greater than about 3500g/m<sup>2</sup>/24 hours as required by claim 3, elongation at break of greater than 100% as required by claim 8, elongation at break of greater than 200% as required by claim 9 and elongation at break of greater than 350% as required by claim 20 would obviously have been present once the Topolkaraev product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

As to claims 10 – 13, Topolkaraev discloses the claimed invention except for that the multilayer film includes about 1 – 50% of the water soluble polymer as required by claim 10, the

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multilayer film includes about 5 – 30% of the water soluble polymer as required by claim 11, the multilayer film includes about 50 – 99% of the biodegradable polymer as required by claim 12 and the multilayer film includes about 70 – 99% of the biodegradable polymer as required by claim 13. It should be noted that the amount of water soluble polymer and biodegradable polymer are a result effective variables. For example, as the amount of water soluble polymer increases, the film becomes more susceptible to water. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create the multilayer film includes about 1 – 50% of the water soluble polymer as required by claim 10, the multilayer film includes about 5 – 30% of the water soluble polymer as required by claim 11, the multilayer film includes about 50 – 99% of the biodegradable polymer as required by claim 12 and the multilayer film includes about 70 – 99% of the biodegradable polymer as required by claim 13. since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the amount of water soluble polymer and the biodegradable polymer in order to create an ideally balanced biodegradable/water soluble multilayer film.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1- 20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

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7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jennifer Boyd

April 13, 2004

  
**Ula C. Ruddock**  
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